

REMARKS

The undersigned appreciates the Examiner's indicating on the PTO-1449 submitted April 21, 1999 that the references have been considered.

The present response amends claims 6 and 22 and requests reconsideration of the rejected claims. Presently, claims 1-9, 11, 12, 16, 20-22, 26-29, 33-35, and 39-61 are pending.

Rejections under 35 USC 112, second paragraph

Claims 6, 22 and 48 are rejected under 35 USC 112, second paragraph. Claim 6 is amended to attend to a typographical/word processing matter. It is amended to recite that the first and second uncured thermosetting resin is further defined therein. This is not considered a narrowing amendment, since claim 6 originally recited that the uncured thermosetting resin of claim 39 is further defined therein. This original recitation referred to the uncured thermosetting resin of claim 39. Since claim 39 recites both a first and second uncured thermosetting resin, it is appropriate that the original recitation in claim 6 referred to both of these thermosetting resins. The amendment to claim 6 clarifies that the recitation refers to both of the uncured thermosetting resins in claim 39 and, thus, does not further narrow claim 6 in which the original recitation referred to the uncured thermosetting resin of claim 39.

Claim 22 is amended to attend to a typographical/word processing matter. It is amended to change the preamble to "Synthetic resin film of claim 20" from "Impregnated paper of claim 20." This is not considered a narrowing amendment, since claim 22 originally depended from claim 20 which is a synthetic resin film and, thus, claim 22 originally included the recitation of a synthetic resin film by virtue of such dependency.

Claim 48 is rejected for not specifying what type of a percentage is indicated in the claim. Under 35 USC 112, second paragraph, it is sufficient that the meaning of the claim be definite when read in light of the specification, *Miles Laboratoies Inc. v.*

Shandon Inc., 27 USPQ 2d 1123, 1126 (Fed. Cir. 1993); it is, thus, not necessary for the claims to further define the percentage. Accordingly, it is respectfully submitted to that claim 48 complies with 35 USC 112, second paragraph.

It is respectfully submitted that the rejections under 35 USC 112, second paragraph, are overcome and withdrawal thereof is requested.

Rejection under 35 USC 102(b)

Claims 1, 9, 11-12, 16, 27, 29 and 33-35 are rejected under 35 USC 102(b) as being anticipated by Albrinck. This rejection is respectfully traversed.

The aspect of claims 1, 9, 11-12, 16, 27, 29 and 33-35 pertinent to this discussion is that they all include a method of producing synthetic resin film for laminates by impregnating a substrate with a thermosetting resin and a low profile additive. The low profile additive is, by definition, substantially spherical. This is supported by the specification, for example, page 5, ll. 29-30. See Manual of Patent Examining Procedure (MPEP) 2111 and 2111.01 (applicant can be its own lexicographer and the claim is read based on the definition of the recitation in the specification).

In contrast to the claimed invention, Albrinck impregnates a combination of resin and alumina particles. As discussed in response to the first Office Action, aluminum oxide (alumina) particles have hard edges and are not substantially spherical. The shape of this additive is illustrated in the pictures attached to the Rule 132 Declaration accompanying the response to the first Office Action.

For a rejection to be sustained under §102(b), each and every element of the claimed invention must be disclosed in the cited prior art reference. MPEP § 2131. Albrinck does not disclose a low profile additive which is, by definition, substantially spherical. Accordingly, it is respectfully submitted that the rejection cannot be sustained and it is requested that it be withdrawn.

First Rejection under 35 USC 103(a)

Claims 1-9, 11-12, 16, 20-22, 26-29, 33-35 and 39-61 are rejected under 35 USC 103(a) as being unpatentable over Albrinck in view of Takahashi and further in view of allegedly admitted prior art. This rejection is respectfully traversed.

One aspect of the claimed invention that is pertinent to this discussion is that it includes a method which impregnates a substrate with a thermosetting resin composition and a low profile additive.

Albrinck is cited for impregnating a substrate with a resin containing abrasion resistant particles. See page 4 of the Office Action, which, for the purposes of this rejection, references the previous discussion of this reference which can be found on page 3 of the Action. Takahashi is cited for disclosing an additive of spherical particles for abrasion resistance. See page 5 of the Action. It is contended that it would be obvious to include Takahashi's spherical abrasion resistant particles to obtain abrasion resistance in Albrinck's decorative laminate. See page 6 of the Action.

It is respectfully submitted that there is no suggestion to modify Albrinck to use Takahashi's particles. Further, it is submitted that Takahashi effectively teaches away from using its particles in Albrinck and that there is no expectation of success in making the proposed modification. As a result, the rejection under 35 USC 103(a) cannot be sustained. See MPEP 2141.02, 2142, 2143, 2143.01 and 2143.02.

The bases for these remarks is that Takahashi only teaches applying its abrasion-resistant resin layer (containing spherical particles) to the surface of a substrate and not impregnating the substrate therewith. See col. 9, ll. 10-28. Indeed, it is critical in Takahashi to obtaining abrasion resistant properties that the relationship between the thickness of the coating layer and the average particle diameter be strictly controlled by the formula: $0.3t \leq d \leq 3.0t$ (where "t" is the average thickness of the

coating layer and “d” is the average particle diameter of the spherical particles). See the abstract.

It is, thus, respectfully submitted that there is no suggestion to modify Albrinck to use Takahashi's spherical particles in combination with resin to impregnate a substrate (as opposed to coating the surface of a substrate), as required by MPEP 2143.01 to establish a prima facie case of obviousness. It is further submitted that Takahashi's teaching of using spherical particles in combination with resin to coat the surface of a substrate teaches away from using spherical particles in combination with resin to impregnate a substrate. Such teaching away cannot sustain an obviousness rejection under MPEP 2141.02. In summary, since Takahashi teaches using spherical particles in combination with resin to coat the surface of a substrate and that it is critical to satisfy the formula: $0.3t \leq d \leq 3.0t$ to obtain abrasion resistance, there is no reasonable expectation of success if Takahashi's spherical particles were impregnated together with resin as required by Albrinck. Such a reasonable expectation of success is required by MPEP 2143.02.

Second Rejection under 35 USC 103(a)

Claims 1-9, 11-12, 16, 20-22, 26-29, 33-35 and 39-61 are rejected under 35-USC 103(a) as being unpatentable over Albrinck in view of 3M and Zeelan and further in view of allegedly admitted prior art. This rejection is respectfully traversed.

It is respectfully submitted that there is no suggestion to modify Albrinck to use 3M and Zeelan's particles. Further, it is submitted that 3M and Zeelan effectively teaches away from using its particles in the claimed invention and that there is no expectation of success in making the proposed modification. As a result, the rejection under 35 USC 103(a) cannot be sustained. See MPEP 2141.02, 2142, 2143, 2143.01, and 2143.02.

The bases for these remarks is that 3M and Zeelan does not teach, or in any way suggest, that its microspheres could be used in a decorative laminate such as

Albrinck's. Instead, as set forth on page 8 of the Office Action, 3M and Zeelan refers to using ceramic microspheres in high solids industrial coatings. Such coatings are not used for decorative laminates, but are instead used for applications such as automotive paint. See the second to last page of 3M and Zeelan (identified as page 15 of 16). Accordingly, there is no suggestion to modify Albrinck to include the ceramic microspheres of 3M and Zeelan, as required by MPEP 2143.01.

Further, 3M and Zeelan teaches using its ceramic microspheres in thermoplastics. See the third page of 3M and Zeelan (identified as page 4 of 16). Thermoplastics are, by definition, the opposite of the thermosetting resins in the claimed invention. Thus, 3M and Zeelan effectively teaches away from using its ceramic microspheres in the thermosetting resins of the claimed invention. As a result, the obviousness rejection cannot be sustained according to MPEP 2141.02.

Finally, it is not reasonable to expect the combination of references would be successful, since 3M and Zeelan does not teach, or in any way suggest, that its microspheres could be used in a decorative laminate such as Albrinck's, and since, in complete contrast to the thermosetting resin of the claimed invention, 3M and Zeelan teaches using ceramic microspheres in thermoplastic materials. As a result, the obviousness rejection cannot be sustained according to MPEP 2143.02.

As a side note, the basis of the rejection in further view of allegedly admitted prior art cannot be addressed, because there is no reference in the rejection to such allegedly admitted prior art.

Unexpected Results

In both obviousness rejections it is appropriate to consider the unexpected results of the claimed invention. Even if it were considered obvious to modify Albrinck to utilize spherical particles based on Takahashi or 3M and Zeelan, such obviousness would be rebutted by the unexpected advantages of using the substantially spherical particles of the claimed invention. These unexpected advantages are demonstrated by

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comparing (1) the results in the table on page 2 of the 132 declaration (submitted with the response to the prior Office Action) in which the scratch resistance is the same or worse with alumina (not substantially spherical) as compared to without, with (2) the results of tables 1 and 2, respectively on pages 9 and 11 of the specification, which show improved scratch resistance when using substantially spherical particles, such as ceramic microspheres or polyethylene powder.

In accordance with the above discussion, it is respectfully submitted that the claims overcome the rejections and it is thus requested that the rejections be withdrawn.

The present response amends claims 6 and 22 without the addition of new matter thereby.

Claims 1-9, 11, 12, 16, 20-22, 26-29, 33-35, and 39-61 should be allowable and notice to that effect is earnestly solicited.

Respectfully submitted,



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MARKED VERSION

6. (Twice amended) The method of claim 39, wherein said first and second uncured thermosetting resin [is] are each selected from the group consisting of melamine-formaldehyde, urea-formaldehyde, phenol-formaldehyde and mixtures thereof.

22. (Twice amended) [Impregnated paper] Synthetic resin film of claim 20, wherein the thermosetting resin is selected from the group consisting of melamine-formaldehyde, urea-formaldehyde, phenol-formaldehyde and mixtures thereof.

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